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REMARKS

Applicant wishes to thank the Examiner for considering the present application.

In the Office Action mailed October 15, 2002, claims 1-32 are pending in the application. Applicant respectfully requests the Examiner for reconsideration.

Claims 1-3, 6-9, 22-24 and 27 stand rejected under 35 USC §103(a) as being unpatentable over *Montpetit* (6,366,761) in view of *Rockwell* (6,327,063) and in further view of *Taormina* (6,257,526). Applicant respectfully traverses.

Claim 1 is directed to a satellite constellation that has a plurality of satellites. The plurality of satellites has a first subset of satellites that are configured to communicate therebetween. Each of the satellites has a reconfigurable optical transmitter and a reconfigurable optical receiver. A second subset of satellites has at least one different satellite than the first subset. In operation, this configuration can be reconfigured several times as the relative positions of the satellites change relative to the earth.

The *Montpetit* reference is directed to a priority-based bandwidth allocation system and bandwidth-on-demand in a low earth orbit satellite data communication network. The Examiner alleges that the *Montpetit* reference includes a satellite constellation that has a first subset of satellites configured to communicate. The Examiner admits no second subset is present in *Monpetit* and also admits to the lack of a reconfigurable transmitter and receiver. (The Examiner includes *Taormina* for the proposition of a second subset of satellites configured to communicate.) The *Montpetit* reference neither teaches nor suggests "a subset" of satellites from a plurality of satellites configured to communicate.

The *Rockwell* reference is cited for showing reconfigurability of an optical transmitter and optical receiver. The *Rockwell* reference is directed to a reconfigurable



laser communication terminal. However, no teaching or suggestion is provided in the *Rockwell* reference for using the reconfigurable communications terminal to form different subsets of satellites. The *Rockwell* reference merely describes a network that may use such a device to change the communication frequencies between the satellites. No teaching or suggestion is found for reconfiguring a plurality of satellites into a first subset and a second subset.

Taormina does show different sets of satellites that are launched at different times. In the broadest sense the different launchings may be thought of as two sets. The present claims, however, require that the first subset of satellites communicate therebetween and that the second subsets communicate therebetween. This is neither suggested nor shown in *Taormina*.

No teaching or suggestion is found in any of the three references for forming the combination suggested by the examiner. The Examiner is merely performing a hindsight reconstruction of the invention by picking and choosing from the prior art. The *Montpetit* reference is an optically linked system, *Rockwell* discloses reconfigurability of the optical system without discussing reconfiguring the satellites into groups, and *Taormina* does not teach or suggest differently grouping satellites into different subsets. In fact, none of the references teach or suggest forming subsets that group satellites into a first subset from a first plurality of satellites and a second subset from the plurality of satellites so that the satellites of each separate subset can communicate between themselves. Applicant respectfully requests the Examiner for reconsideration of this rejection. Likewise, claims 2, 3, 6, 7, 8, 9, 23-24 and 27 are also believed to be allowable for the same reasons described above with respect to claim 1.

Claim 4, 5, 25 and 26 stand rejected under 35 USC §103(a) as being unpatentable over *Montpetit* in view of *Rockwell* in view of *Taormina* and in further view of *Glynn* (5,552,920). Applicant respectfully traverses.

Claim 4 is directed to a reconfigurable optical transmitter comprising an array of diodes. Claim 4 is dependent on claim 1. The *Glynn* reference describes the use of an array of laser diodes. Adding *Glynn* to the combination of *Montpetit*, *Rockwell* and *Taormina* does not teach or suggest the other portions of claim 1 as described above. Applicant therefore requests the Examiner for reconsideration of this rejection as well.

Claims 10, 17-20 and 30-32 stand rejected under 35 USC §103(a) as being unpatentable over *Montpetit* in view of *Rockwell* in further view of *Taormina* in further view of *Kintis* (5,661,582). Applicant respectfully traverses. Claim 10 is a further limitation of claim 1. Claim 10 is directed to a satellite constellation “wherein said subset comprises seven satellites using three optical carriers.” The optical transmitter of *Kintis* can provide several wavelengths. Also, the *Kintis* reference can provide three optical carriers. Seven satellites are, however, not specifically described. *Rockwell*, *Taormina* and *Montpetit* have the deficiencies described above with respect to claim 1. Therefore, claim 10 is also believed to be allowable for the same reasons set forth above. Applicant therefore requests the Examiner for reconsideration of this rejection as well.

Claim 17 has been amended to state that the first subset is less than the number of the plurality of satellites. This clarifies that the first subset is not the same as the plurality of satellites. The following arguments apply equally to claims 17 and 30. The combination of the three main references was discussed above as having several deficiencies. Forming a subset of satellites as recited in claims 17 and 30 is one of the deficiencies. Claims 18 and 30 add the further limitations of the second subset which is

also not taught or suggested. The lack of the second subset was also described above. Claims 19, 20, 31 and 32 are further limitations of their respective independent claims and are believed to be allowable for the same reasons set forth above.

Claims 11-14 and 21, 28 and 29 stand rejected under 35 USC §103 as being unpatentable over *Montpetit* in view of *Rockwell* in further in view of *Zancho* (6,208,625). Applicant respectfully traverses.

Claim 11 describes a global communication system that has a plurality of satellites spaced about the earth. A first set of satellites form a local network over the land mass. The first subset has a plurality of optical carriers that are used for intercommunication within the subset. A second plurality of optical carriers is assigned for communicating with other satellites outside of the first subset. Claim 28 is similar to claim 11 except the second set of satellites are recited. The *Montpetit* and *Rockwell* references as pointed out by the Examiner, do not disclose a subset of satellites having a first plurality of optical carriers assigned thereto for intercommunication and a second plurality of optical carriers assigned for communicating with other satellites outside of the subset. The *Zancho* reference does not teach forming subsets nor is there any discussion of grouping optical carriers in a first plurality for communication within the subset and into a second plurality for communication outside the group. Because the combination recited in claims 11 and 28 is not taught or suggested by the references, applicant respectfully requests the Examiner for reconsideration.

Likewise, claims 12-14, 21 and 29 further limit their independent claims. Therefore, applicant respectfully believes that these claims are also allowable for the same reasons set forth above and further due to the additional limitations recited therein.



Claims 15 and 16 stand rejected under 35 USC §103 as being unpatentable over *Montpetit* and in view of *Rockwell*, *Zancho* and *Glynn*. Applicant respectfully traverses.

Claims 15 and 16 are further limitations of claim 11. Claim 11 has several deficiencies noted above in the combination of *Montpetit* and *Rockwell*. Applicant therefore requests the Examiner for a reconsideration of this rejection as well.

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The combinations of references provided by the Examiner do not teach or suggest the invention as claimed in the rejected claims because of several deficiencies discussed above. Therefore, applicant respectfully requests the Examiner for a reconsideration of each of the rejections above, withdrawal of the rejections and allowance.

Should the Examiner have any questions or comments, the Examiner is respectfully requested to contact the undersigned attorney.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

17. (Amended) A method of communicating within a satellite communications system comprising the steps of:

deploying a plurality of satellites;

grouping a first subset of the plurality of satellites into a first local area network, said first subset having fewer than the plurality of satellites;

forming a plurality of routes between the satellites in the first local area network; and

assigning an optical carrier for each route.